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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/731,421 | 12/09/2003 | Mohan Krishnan | 279.650US1 | 3925 |
| 21186 7590 07/08/2009 SCHWEGMAN, LUNDBERG & WOESSNER, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402 | | | | |
| EXAMINER STOKLOS, JOSEPH A | | | | |
| ART UNIT 3762 | | PAPER NUMBER | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@slwip.com

Office Action Summary

Application No.

10/731,421

Applicant(s)

KRISHNAN ET AL.

Examiner

JOSEPH STOKLOSA

Art Unit

3762

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5,7 and 9-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,7 and 9-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Remarks, filed 6/18/2009, with respect to Claims 1, 5, 7, and 9-18 have been fully considered and are persuasive. The finality of Final Rejection 3/18/2009 has been withdrawn however, this action is made Final since they are based on the amended claims filed 1/03/2008 which were amended due to the non-final rejection of 7/3/2007.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 5, 7, and 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thoren (US 4,149,542) in view of Helland et al. (US 5,318,572).

5. Thoren discloses an endocardial lead with a lead body extending from proximal to a distal end. Thoren discloses a titanium ring electrode (e.g. side component 5) that is textured with pores to allow for tissue ingrowth and a distal tip electrode that is inert and thereby prevents clotting (e.g. Col. 2, line 24- Col. 3, line 52).
6. Thoren fails to explicitly teach the use of titanium microspheres for texturing the ring electrode and the lead body. Helland teaches that it is known to use titanium microspheres between 75-100um to form a layer of blood cells around the lead body electrode as set forth in e.g., column 5, lines 62 -66; column 10, lines 19-20, Col. 6, line 16; for providing the predictable results of immobilizing and stabilizing the electrode and lead body upon implantation. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system as taught by Thoren with use of a textured coating of titanium microspheres between 75-100um to form a layer of blood cells around the electrode and lead body for providing the predictable results of immobilizing and stabilizing the electrode and lead body upon implantation.
7. Examiner considers Helland to teach the microspheres allowing a layer of blood cells to form as blood passes through the pores created by the microspheres (e.g. Col. 6, line 16). Further Examiner must consider the textured microspheres to also prevent clot formation since the microsphere textured surface is of the same material and size as applicant's claimed textured surface.
8. With regard to claim 9, Thoren discloses no active coating that elute from the surface of the lead to minimize clotting.

9. Claims 1, 5, 7, and 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thoren in view of Helland and in view of MacGregor (US 4,280,514).
10. Thoren discloses an endocardial lead with a lead body extending from proximal to a distal end. Thoren discloses a titanium ring electrode (e.g. side component 5) that is textured with pores to allow for tissue ingrowth and a distal tip electrode that is inert and thereby prevents clotting (e.g. Col. 2, line 24- Col. 3, line 52).
11. Helland teaches that it is known to use titanium microspheres between 75-100um to form a layer of blood cells around the lead body electrode as set forth in e.g., column 5, lines 62 -66; column 10, lines 19-20, Col. 6, line 16; for providing the predictable results of immobilizing and stabilizing the electrode and lead body upon implantation.
12. MacGregor teaches that it is known to select the particle size and orientation of sphere particles on an electrode surface to provide the predictable results of promoting tissue ingrowth while at the same time preventing clot formation through formation of flattened endothelial-like cells which confer thromboresistance (e.g. Col. 2, line 59- Col. 3, line 22).
13. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system as taught by Thoren with use of a textured coating of titanium microspheres between 75-100um, and to orient the spheres to form a layer of blood cells around the electrode and lead body for providing the predictable results of immobilizing and stabilizing the electrode and lead body upon implantation and promoting tissue ingrowth while at the same time preventing clot formation through formation of flattened endothelial-like cells which confer thromboresistance.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **JOSEPH STOKLOSA** whose telephone number is (571)272-1213. The examiner can normally be reached on **Monday-Friday 7:30-4:00**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George R Evanisko/
Primary Examiner, Art Unit 3762

Joseph Stoklosa
Examiner
Art Unit 3762

/Joseph Stoklosa/
Examiner, Art Unit 3762
6/30/2009